

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) ~~A rotor for generating vortex water flow, comprising:~~ A filtering apparatus comprising:

a barrel having a water inflow port, a processed water discharge port, and a condensed water discharge port;

at least one of rotor for generating vortex water flow disposed in the barrel, comprising:
a plurality of first blades extended in a radial direction from a rotational axis thereof; and
a plurality of second blades extended in the radial direction from the rotational axis, and disposed at positions different from positions of the first blades in a direction of the rotational axis, and

one or a plurality of filter tray disposed alternatively with the rotors in the barrel.

2. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 1, wherein the first blades and the second blades have widths different from each other in a circumferential direction around the rotational axis.

3. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 2, wherein the first blades and the second blades are so disposed as to be overlapped with each other.

4. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 1, wherein the first blades and the second blades are disposed at positions different from each other in a circumferential direction around the rotational axis.

5. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 4, wherein the first blades and the second blades are partially overlapped with each other.

6. **(Currently Amended)** The ~~rotor~~ filtering apparatus as claimed in claim 4, wherein the first blades and the second blades are distanced from each other in the circumferential direction.

7. **(Currently Amended)** The ~~rotor~~ filtering apparatus as claimed in claim 6, wherein the first blades and the second blades are so disposed as to be distanced equally from each other in the circumferential direction.

8. **(Currently Amended)** The ~~rotor~~ filtering apparatus as claimed in claim 4, further comprising at least one of protrusion attached on outer surfaces of the first blades and/or second blades.

9. **(Currently Amended)** The ~~rotor~~ filtering apparatus as claimed in claim 8, wherein the protrusion is so formed as to have width varying in the circumferential direction.

10. **(Currently Amended)** The ~~rotor~~ filtering apparatus as claimed in claim 9, wherein the protrusion is so formed as to have streamlined width in the circumferential direction.

11. **(Currently Amended)** The ~~rotor~~ filtering apparatus as claimed in claim 10, wherein the protrusion is so formed as to have a rear shape curved rearward in the circumferential direction.

12. **(Currently Amended)** The ~~rotor~~ filtering apparatus as claimed in claim 9, wherein the protrusion is so formed as to have a horizontal cross section of circle shape substantially.

13. **(Currently Amended)** The ~~rotor~~ filtering apparatus as claimed in claim 7, wherein a plurality of protrusions are respectively attached between the first blades and the second blades, and sizes of the protrusions become greater gradually in the radial direction.

14. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 4, wherein the first blades and the second blades have widths same with each other in the circumferential direction.

15. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 4, wherein the first blades and the second blades are disposed alternately in the circumferential direction.

16. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 1, wherein the first blades and the second blades are disposed so that at least a part thereof are overlapped with each other in the rotational axis direction and are disposed so as to be distanced from each other in a the rotational axis direction, and
at least one of protrusion is disposed between the first blades and the second blades.

17. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 16, wherein the protrusion is so formed as to have width varying in the circumferential direction.

18. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 17, wherein the protrusion is so formed as to have streamlined width in the circumferential direction.

19. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 18, wherein the protrusion is so formed as to have a rear shape curved rearward in the circumferential direction.

20. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 17, wherein the protrusion is so formed as to have a horizontal cross section of circle shape substantially.

21. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 16, wherein a plurality of protrusions are respectively attached between the first blades and the second blades, and sizes of the protrusions become greater gradually in the radial direction.

22. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 1, further comprising:
a first ring formed integrally with the first blades and disposed coaxially with the rotational axis; and
a second ring formed integrally with the second blades and disposed coaxially with the rotational axis.

23. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 22, wherein the first ring and the second ring have radiuses different from each other.

24. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 1, further comprising a first rotor equipped with the first blades, and a second rotor equipped with the second blades;
wherein the first rotor and the second rotor are attached to each other.

25. (Currently Amended) The ~~rotor~~ filtering apparatus as claimed in claim 1, further comprising a first rotor equipped with the first blades, and a second rotor equipped with the second blades;
wherein the first rotor and the second rotor are formed in a body.

26. (Canceled)

27. (Currently Amended) The filtering apparatus as claimed in claim ~~[[26]]~~ 1, wherein the filter tray is fixed in the barrel.

28. (Currently Amended) The filtering apparatus as claimed in claim ~~[[26]]~~ 1, wherein the filter tray has at least one of water passage port so formed as to penetrate a plane thereof.

29. (Original) The filtering apparatus as claimed in claim 28, wherein the filter tray includes a supporting plate having a disk shape, a drain cloth attached on both surface of the supporting plate, and a separation membrane attached to an outer surface of the drain cloth.

30. (Original) The filtering apparatus as claimed in claim 29, wherein the drain cloth and the separation membrane are adhered onto the supporting plate with thermosetting adhesive.